We claim:

1. A method for immobilizing natural or synthetic biomolecules to surfaces comprising:
    a. covalently linking the natural or synthetic biomolecule to a mono- or bi-functional polymer and
    b. covalently and/or electrostatically immobilizing the biomolecule/polymer conjugate to a unmodified or modified surface.
2. A method of claim 1 wherein the biomolecule is an oligonucleotide, a polynucleotide, a protein, a glycoprotein, a peptide or a carbohydrate.
3. A method of claim 2 wherein an oligo- or poly-nucleotide is prepared to incorporate a reactive functionality and the modified oligo- or poly-nucleotide is covalently linked to a mono- or bi-functional polymer that possesses a reactive functionality that is able to form a covalent bond with the reactive functionality on the oligonucleotide.
4. A method of claim 3 wherein the oligonucleotide is modified to incorporate a single or a plurality of nucleophilic groups either 3', 5' or internally.
5. A method of claim 4 wherein the nucleophile is an aliphatic or aromatic amino, thiol, hydrazine, thiosemicarbazide, hydrazide, thiocarbazide, carbazide or aminooxy group.
6. A method of claim 4 wherein the nucleophile is a derivative of 2-hydrazinopyridine or aminoxyacetic acid.
7. A method of claim 3 wherein the oligonucleotide is modified to incorporate a single or a plurality of electrophilic groups either 3', 5' or internally.
8. A method of claim 7 wherein the electrophilic moiety is an aliphatic or aromatic aldehyde, ketone, epoxide, isocyanate, isothiocyanate, succinimidyl ester or cyanuric chloride.
9. A method of claim 8 wherein the electrophilic moiety is a linkable aromatic aldehyde or ketone.
10. A method of claim 3 wherein the surface is modified to possess either neutral, cationic or anionic groups or a combination neutral, anionic and/or cationic moieties.

11. A method of claim 10 wherein the polymer is cationic and chosen from polyethyleneimine, poly-l-lysine or poly-l-ornithine and the cationic polymer is modified to include a reactive nucleophilic functional group chosen from hydrazine derivatives including both aliphatic and aromatic hydrazines, carbzides, semicarbazides, semicarbazides, thiosemicarbazides or aminooxy groups.
12. A method of claim 10 wherein the polymer is cationic and chosen from polyethyleneimine, poly-l-lysine or poly-l-ornithine and the cationic polymer is modified to include a reactive electrophilic functional group chosen from aldehyde or ketone.
13. A method of claim 13 wherein the surface is made cationic by modification with an amino- or polyamino-silane or a cationic polymer preferentially chosen from polyethyleneimine, poly-l-lysine or poly-l-ornithine.
14. A method of claim 14 wherein the surface is modified to incorporate directly an electrophilic or nucleophilic functionality.
15. A method of claim 14 wherein the electrophilic reactive functionality is chosen from aliphatic or aromatic aldehyde, ketone, epoxide, isocyanate, isothiocyanate, succinimidyl ester or cyanuric chloride.
16. A method of claim 14 wherein the nucleophilic reactive functionality is chosen from hydrazine derivatives including both aliphatic and aromatic hydrazines, carbzides, semicarbazides, semicarbazides, thiosemicarbazides or oxyamino moieties.
17. A method of claim 3 wherein the polynucleotide is modified to incorporate a nucleophilic or electrophilic group.
18. A method of claim 17 wherein the electrophilic or nucleophilic moiety or plurality of moieties is incorporated at the 5'-terminus of a primer incorporated in a polymerase chain reaction or reverse transcriptase elongation reactions.
19. A method of claim 18 wherein the reactive moiety is incorporated on a modified triphosphate used in a polymerase chain reaction or a transcriptase elongation reaction.

20. A method of claim 3 wherein the polynucleotide formed in either claims 18 or 19 is covalently linked to a polymer modified to incorporate a complementary reaction function.

21. A method of claim 20 wherein the polynucleotide/polymer conjugate is immobilized on a surface that has been modified to incorporate a reactive group similar to the reactive functionality incorporated in the polynucleotide.

22. A method of claim 20 wherein the polynucleotide/polymer conjugate is immobilized on a surface that has been modified to incorporate an electrophilic moiety if the functionality on the triphosphate is an electrophile.

23. A method of claim 20 wherein the polynucleotide/polymer conjugate is immobilized on a surface that has been modified to incorporate an electrophilic moiety if the functionality on the triphosphate is an electrophile.

24. A method of claim 20 wherein the polynucleotide/polymer conjugate is immobilized on a surface that has been modified to incorporate a nucleophilic moiety if the functionality on the triphosphate is a nucleophile.

25. A method of claim 3 wherein a conjugate formed between a plurality of oligonucleotide primers that are modified on its 5'-end with a nucleophilic moiety and a polymer modified with an complementary reactive electrophile is amplified using a DNA polymerase or reverse transcriptase and the product of the enzymic reaction is immobilized on a surface that can form a covalent/electrophilic bond with a suitable reactive group on the surface.

26. A method of claim 25 wherein the electrophilic moieties are aliphatic or aromatic ketones or aldehyde and the nucleophilic moieties are aliphatic and aromatic hydrazines, carbzides, semicarbazides, semicarbazides, thiosemicarbazides or oxyamino moieties.

27. A method of claim 2 wherein the protein is modified to incorporate aliphatic and aromatic hydrazines, carbzides, semicarbazides, semicarbazides, thiosemicarbazides or oxyamino moieties.

28. A method of claim 2 wherein the protein is modified to incorporate aliphatic or aromatic aldehydes or ketones.

29. A method of claim 2 wherein a glycoprotein is oxidized with, for example sodium periodate, to form aldehyde moieties .
30. A method of claim 2 wherein the protein incorporated with the first component of a reaction couple is reacted with a polymer possessing the second component of a reaction couple to produce a protein/polymer conjugate.
31. A method of claim 30 wherein the protein/polymer conjugate is immobilized on a surface possessing the first component of a reaction couple or a different reactive moiety that reacts with the second component of the reaction couple.
32. A method of claim 3 wherein a peptide is modified or synthetic prepared to possess the first component of a reaction couple.
33. A method of claim 2 wherein the peptide is modified to incorporate aliphatic and aromatic hydrazines, carbzides, semicarbazides, semicarbazides, thiosemicarbazides or oxyamino moieties.
34. A method of claim 2 wherein the peptide is modified to incorporate aliphatic or aromatic aldehydes or ketones.
35. A method of claim 2 wherein the peptide incorporated with the first component of a reaction couple is reacted with a polymer possessing the second component of a reaction couple to produce a protein/polymer conjugate.
36. A method of claim 35 wherein the peptide/polymer conjugate is immobilized on a surface possessing the first component of a reaction couple or a different reactive moiety that reacts with the second component of the reaction couple.